

Name: _____ Date: _____

1. When people discuss the “nature vs. nurture” controversy, Nature refers to _____ and Nurture refers to _____.
 - A) genes; heredity
 - B) chromosomes; genetics
 - C) biology; environment
 - D) DNA; hormones
 - E) thinking; behavior

2. A human sperm cell contains
 - A) 23 chromosomes.
 - B) 23 genes.
 - C) 46 chromosomes.
 - D) 46 genes.
 - E) 92 DNA strands.

3. Chromosomes are located within human
 - A) bone cells.
 - B) genes.
 - C) neurotransmitters.
 - D) gender schemas.
 - E) unconscious.

4. The information carried in a gene is expressed as
 - A) the genome.
 - B) DNA.
 - C) a chromosome.
 - D) a protein.
 - E) a cell.

5. The complete set of genetic instructions in an organism's chromosomes is called the
 - A) heritability index.
 - B) DNA molecule.
 - C) genome.
 - D) schema.
 - E) zygote.

6. Identical twins originate from the fertilization of
- A) a single egg cell by a single sperm cell.
 - B) two egg cells by a single sperm cell.
 - C) a single egg cell by two sperm cells.
 - D) two egg cells by two sperm cells.
 - E) either two egg cells or two sperm cells.
7. Research most clearly suggests that personality traits are more strongly influenced by
- A) genes than by home environment.
 - B) home environment than by genes.
 - C) genes than by peers.
 - D) home environment than by peers.
 - E) genes than by heredity.
8. Who are likely to show the greatest similarity in personality?
- A) Ruth and Ramona, identical twins
 - B) Philip and Paul, fraternal twins
 - C) Larry and Laura, brother and sister
 - D) Vincent Sr. and Vincent Jr., father and son
 - E) Elizabeth and Betsy, mother and daughter
9. Two plants are grown under the same environmental conditions, including the same soil conditions and the same amount of light and water, but one grows to 2 feet tall and the other is 1 foot tall. In this case, the heritability would be closest to
- A) 5 percent.
 - B) 25 percent.
 - C) 50 percent.
 - D) 80 percent.
 - E) 95 percent.
10. Which of the following research questions would be most interesting to a molecular geneticist?
- A) How do children develop gender identities in school?
 - B) What impact did climate change have on the religious practices of early humans?
 - C) Do IQ scores change as children age?
 - D) What are the genetic differences between siblings who are and are not depressed?
 - E) Are there genetic influences on the impact of synapses on neural transmission?

11. When molecular geneticists take a blood sample or a cheek swab, what are they trying to obtain?
- A) protein molecules
 - B) DNA from the nucleus of a cell
 - C) heritability rates
 - D) chromosomes from one parent
 - E) random errors in gene replication
12. Evolutionary psychologists emphasize that environmentally adaptive behaviors are those that have promoted
- A) reproductive success.
 - B) personal happiness.
 - C) cultural diversity.
 - D) heritability.
 - E) behavior genetics.
13. The reproductive advantage enjoyed by organisms best suited to a particular environment is known as
- A) self-regulation.
 - B) behavior genetics.
 - C) natural selection.
 - D) heritability.
 - E) nurture.
14. According to evolutionary psychologists, behaviors that promote reproductive success are likely to be
- A) socially prohibited.
 - B) genetically predisposed.
 - C) ecologically disruptive.
 - D) disease-producing.
 - E) hormonally adaptive.
15. An evolutionary psychologist would be likely to suggest that human preferences for sweet-tasting foods
- A) have hindered human reproduction.
 - B) are genetically predisposed.
 - C) correlate to climate conditions.
 - D) vary widely across cultures.
 - E) are not passed genetically to children.

16. The part of a neuron that transmits neural messages to other neurons or to muscles or glands is called the
- A) dendrite.
 - B) synapse.
 - C) association area.
 - D) axon.
 - E) cell body.
17. Which of the following are located exclusively within the brain and spinal cord?
- A) sensory neurons
 - B) motor neurons
 - C) myelin sheath
 - D) interneurons
 - E) axons
18. Resting potential is to action potential as _____ is to _____.
- A) adrenal gland; pituitary gland
 - B) sensory neuron; motor neuron
 - C) temporal lobe; occipital lobe
 - D) polarization; depolarization
 - E) dendrite; axon
19. The chemical messengers released into the spatial junctions between neurons are called
- A) hormones.
 - B) neurotransmitters.
 - C) synapses.
 - D) sensory neurons.
 - E) motor neurons.
20. An undersupply of serotonin is most closely linked to
- A) Alzheimer's disease.
 - B) schizophrenia.
 - C) Parkinson's disease.
 - D) depression.
 - E) euphoria.

21. Schizophrenia is most closely linked with excess receptor activity for the neurotransmitter
- A) dopamine.
 - B) epinephrine.
 - C) acetylcholine.
 - D) serotonin.
 - E) GABA.
22. Complete sensation in the absence of complete perception is best illustrated by
- A) Weber's law.
 - B) prosopagnosia.
 - C) conduction deafness.
 - D) color constancy.
 - E) sensory interaction.
23. The process by which we select, organize, and interpret sensory information in order to recognize meaningful objects and events is called
- A) sensory adaptation.
 - B) parallel processing.
 - C) sensation.
 - D) perception.
 - E) accommodation.
24. You typically fail to consciously perceive that your own nose is in your line of vision. This best illustrates
- A) subliminal perception.
 - B) change blindness.
 - C) fovea.
 - D) selective attention.
 - E) the visual cliff.
25. Researchers found that 40 percent of people focused on repeating a list of challenging words failed to notice a change in the person speaking. This best illustrates
- A) feature detectors.
 - B) the blind spot.
 - C) the difference threshold.
 - D) priming.
 - E) change deafness.

26. Ohio State University pedestrians were more likely to cross streets unsafely if they were talking on a cell phone. This best illustrates the impact of
- A) place theory.
 - B) gate-control theory.
 - C) selective attention.
 - D) the phi phenomenon.
 - E) retinal disparity.
27. If an adult develops cataracts, his or her
- A) absolute threshold for light is likely to increase.
 - B) difference threshold for light is likely to decrease.
 - C) absolute threshold for light is likely to decrease.
 - D) difference threshold for light is likely to remain unchanged.
 - E) absolute threshold for light is likely to remain the same.
28. During a hearing test, many sounds were presented at such a low level of intensity that Mr. Antall could hardly detect them. These sounds were below Mr. Antall's
- A) subliminal threshold.
 - B) absolute threshold.
 - C) adaptation threshold.
 - D) difference threshold.
 - E) auditory threshold.
29. Which theory emphasizes that personal expectations and motivations influence the level of absolute thresholds?
- A) signal detection theory
 - B) frequency theory
 - C) opponent-process theory
 - D) place theory
 - E) bottom-up theory
30. An exhausted forest ranger may notice the faintest scent of a forest fire, whereas much stronger but less important odors fail to catch her attention. This fact would be of greatest relevance to
- A) the Young-Helmholtz theory.
 - B) opponent-process theory.
 - C) signal detection theory.
 - D) frequency theory.
 - E) place theory.

31. Audiotapes of soothing ocean sounds accompanied by faint and imperceptible verbal messages designed to increase a desire to lose weight best illustrate
- A) synaesthesia.
 - B) sensory interaction.
 - C) subliminal stimulation.
 - D) parallel processing.
 - E) difference thresholds.
32. When informed that a brief imperceptible message would be flashed repeatedly during a popular TV program, many viewers reported feeling strangely hungry or thirsty during the show. Since the imperceptible message had nothing to do with hunger or thirst, viewers' strange reactions best illustrate
- A) the McGurk effect.
 - B) sensory adaptation.
 - C) the volley principle.
 - D) a placebo effect.
 - E) accommodation.
33. If the just-noticeable difference for a 10-ounce weight is 1 ounce, the just noticeable difference for an 80-ounce weight would be _____ ounce(s).
- A) 1
 - B) 2
 - C) 4
 - D) 8
 - E) 10
34. The constant quivering movements of our eyes enable us to
- A) focus the light on our retina.
 - B) adjust the size of the pupil.
 - C) minimize sensory adaptation.
 - D) perceive speed more accurately.
 - E) see in low levels of light.
35. Intensity is to brightness as wavelength is to
- A) accommodation.
 - B) frequency.
 - C) amplitude.
 - D) hue.
 - E) disparity.

36. The amount of light entering the eye is regulated by the
- A) lens.
 - B) iris.
 - C) retina.
 - D) optic nerve.
 - E) feature detectors.
37. Bipolar cells are located in the
- A) optic nerve.
 - B) retina.
 - C) blind spot.
 - D) lens.
 - E) cochlea.
38. Under very dim levels of illumination
- A) the iris expands to allow more light to reach the retina.
 - B) rods are more light-sensitive than cones.
 - C) foveas react to increase the sensitivity of the optic nerve.
 - D) feature detectors in the retina activate.
 - E) rods fire according to place theory to perceive the available light.
39. The area of the retina where the optic nerve leaves the eye is called the
- A) blind spot.
 - B) pupil.
 - C) visual cortex.
 - D) cornea.
 - E) lens.
40. Opponent-process cells have been located in the
- A) thalamus.
 - B) cochlea.
 - C) spinal cord.
 - D) visual cortex.
 - E) semicircular canals.

41. Current research suggests that
- A) the Young-Helmholtz theory best explains how we experience color.
 - B) opponent-process theory is the most comprehensive theory for explaining color vision.
 - C) both the trichromatic and opponent-process theories are valid in explaining color vision.
 - D) both the Young-Helmholtz and the opponent-process theories are wrong in explaining color vision.
 - E) frequency theory shows promise in explaining how we experience color vision.
42. An 80-decibel sound is _____ times louder than a 60-decibel sound.
- A) 2
 - B) 10
 - C) 20
 - D) 100
 - E) 200
43. The volley principle is most directly relevant to our perception of
- A) temperature.
 - B) color.
 - C) brightness.
 - D) pain.
 - E) pitch.
44. Frequency theory best explains _____, while place theory best explains _____.
- A) how we process red, green, and blue light; why we experience color afterimages
 - B) how we perceive low-pitched sounds; how we perceive high-pitched sounds
 - C) how touch sensations involve more than tactile stimulation; why stroking a pressure spot leads to the sensation of a tickle
 - D) how we are able to sense our body position without looking; how the vestibular sense functions
 - E) how phantom limb sensations occur; how stimulation of the larger fibers in the spinal cord stop pain
45. A time lag between left and right auditory stimulation is important for accurately
- A) locating sounds.
 - B) detecting pitch.
 - C) recognizing rhythms.
 - D) judging amplitude.
 - E) determining frequency.

46. On the day she is to be interviewed for an important new position, Rachel awakens with a severe toothache. During the interview she feels no pain; not until 30 minutes later does she become aware again of the troublesome toothache. Rachel's experience is best explained by
- A) the opponent-process theory.
 - B) Weber's law.
 - C) the gate-control theory.
 - D) the Young-Helmholtz theory.
 - E) frequency theory.
47. During the months when there is a large amount of pollen in the air, your hay fever severely affects your sense of smell. At the same time your food all seems to taste the same. This illustrates the importance of
- A) accommodation.
 - B) sensory interaction.
 - C) kinesthesia.
 - D) serial processing.
 - E) sensory adaptation.
48. As your teacher dims the lights to show a movie clip, you still perceive your friend's shirt as red. Which of the following best explains this phenomenon?
- A) lightness constancy
 - B) perceptual adaptation
 - C) color constancy
 - D) context effects
 - E) perceptual set
49. After chicks were fitted with special lenses that visually displaced objects to the left, they
- A) quickly learned to compensate by pecking to the left of where the food appeared to be.
 - B) only gradually learned to compensate by pecking to the right of where the food appeared to be.
 - C) only gradually learned to compensate by pecking to the left of where the food appeared to be.
 - D) never adapted to the visual distortion.
 - E) immediately adapted and pecked successfully at the food.

50. Imagine that a softball player wears special glasses that shift her visual field upward 20 degrees. This means that when the player wears these glasses, everything appears higher than it actually is. With practice the player can hit a ball with the glasses on. What will happen when the player first hits a ball with the glasses off?
- A) She will believe that the ball is higher than it really is.
 - B) She will accurately perceive where the ball really is.
 - C) She will use the context of the situation to determine where the ball is.
 - D) She will believe that the ball is lower than it really is.
 - E) She will easily hit the ball because of visual accommodation to the changing stimuli.
51. Farouk insists that by intense mental concentration he can actually influence the mechanically generated outcomes of slot machines. Farouk is most specifically claiming to possess the power of
- A) telepathy.
 - B) clairvoyance.
 - C) psychokinesis.
 - D) precognition.
 - E) transduction.
52. The brains of patients with Parkinson's disease have little dopamine. Drugs used to treat such patients bind to dopamine receptors, thereby stimulating those receptors. These drugs would be considered
- A) antagonists.
 - B) sympathetic.
 - C) selectively permeable.
 - D) endorphins.
 - E) agonists.
53. Botulin is a poison with a molecular structure so similar to acetylcholine (ACh) that it blocks the effects of ACh in synapses, making botulin which kind of molecule?
- A) agonist
 - B) antagonist
 - C) endorphin
 - D) endocrine
 - E) autonomic

54. For you to be able to run, _____ must relay messages from your central nervous system to your leg muscles.
- A) interneurons
 - B) agonists
 - C) motor neurons
 - D) sensory neurons
 - E) the autonomic nervous system
55. Messages are transmitted from your spinal cord to your digestive system's stomach muscles by the
- A) endocrine system.
 - B) central nervous system.
 - C) sympathetic nervous system.
 - D) somatic nervous system.
 - E) glands.
56. An accelerated heartbeat is to a slowed heartbeat as the _____ nervous system is to the _____ nervous system.
- A) somatic; autonomic
 - B) autonomic; somatic
 - C) central; peripheral
 - D) sympathetic; parasympathetic
 - E) parasympathetic; sympathetic
57. Stimulated digestion is to inhibited digestion as the _____ nervous system is to the _____ nervous system.
- A) somatic; autonomic
 - B) autonomic; somatic
 - C) central; peripheral
 - D) sympathetic; parasympathetic
 - E) parasympathetic; sympathetic
58. People can simultaneously process many aspects of sensory information such as color, shape, and size. This best illustrates the functioning of multiple
- A) ACh agonists.
 - B) dendrites.
 - C) endorphins.
 - D) neural networks.
 - E) ACh antagonists.

59. If a professor accused you of cheating on a test, your adrenal glands would probably release _____ into your bloodstream.
- A) endorphins
 - B) acetylcholine
 - C) serotonin
 - D) epinephrine
 - E) insulin
60. The master gland of the endocrine system is the
- A) thyroid gland.
 - B) adrenal gland.
 - C) pituitary gland.
 - D) pancreas.
 - E) hypothalamus.
61. What is the main difference between an MRI scan and an fMRI scan?
- A) MRI scans are able to show internal structures of the brain, fMRI scans can also show external structures.
 - B) MRI scans use X-rays, fMRI scans use gamma rays.
 - C) MRI scans measure glucose levels in the brain, fMRI scans measure oxygen levels.
 - D) MRI scans show structural details of the brain, fMRI scans show structure and activity levels.
 - E) MRI scans measure brain wave activity, fMRI scans use a series of X-ray images to show structural details.
62. The reticular formation is located in the
- A) brainstem.
 - B) limbic system.
 - C) sensory cortex.
 - D) motor cortex.
 - E) cerebellum.

63. Ellen volunteers during her AP psychology class to try to balance a yardstick on her two fingers. While her eyes are open, she finds the task quite easy. However, when she closes her eyes, she finds the same task almost impossible. Which brain region relies on visual information in coordinating our voluntary movements?
- A) hypothalamus
 - B) reticular formation
 - C) thalamus
 - D) amygdala
 - E) cerebellum
64. One function of the glial cells is to
- A) control heartbeat and breathing.
 - B) mimic the effects of neurotransmitters.
 - C) provide nutrients to interneurons.
 - D) stimulate the production of hormones.
 - E) control the muscle movements involved in speech.
65. The occipital lobes are to _____ as the temporal lobes are to _____.
- A) hearing; sensing movement
 - B) seeing; sensing touch
 - C) sensing pleasure; sensing pain
 - D) seeing; hearing
 - E) speaking; hearing
66. To trigger a person's hand to make a fist, José Delgado stimulated the individual's
- A) motor cortex.
 - B) hypothalamus.
 - C) sensory cortex.
 - D) reticular formation.
 - E) limbic system.
67. While mapping the motor cortex, researchers Foerster and Penfield found that
- A) although the mind's subsystems are localized in specific brain regions, the brain acts like a unified whole.
 - B) damage to a specific area in the left frontal lobe disrupted speech ability.
 - C) body areas requiring the greatest control occupied the greatest amount of cortical space.
 - D) if one part of the brain is damaged, the brain will compensate by putting other areas to work.
 - E) our brain processes most information out of our awareness.

68. The auditory hallucinations experienced by people with schizophrenia are most closely linked with the activation of areas in which brain area?
- A) motor cortex
 - B) amygdala
 - C) temporal lobes
 - D) hypothalamus
 - E) sensory cortex
69. Which brain area is primarily involved with understanding and producing meaningful speech?
- A) sensory cortex
 - B) angular gyrus
 - C) association areas
 - D) Wernicke's area
 - E) hypothalamus
70. The ability to recognize faces with the right hemisphere but not with the left hemisphere best illustrates
- A) Parkinson's disease.
 - B) neurogenesis.
 - C) plasticity.
 - D) lateralization.
 - E) aphasia.
71. The localization of a function such as speech production to the right or left side of the brain is called
- A) neurogenesis.
 - B) lateralization.
 - C) hemispherectomy.
 - D) plasticity.
 - E) reticular formation.

72. Psychologist Michael Gazzaniga asked split-brain patients to stare at a dot as he flashed HE □ ART on a screen. HE appeared in the left visual field, ART in the right. When asked to point to the word with their left hand, patients pointed to
- A) HE.
 - B) ART.
 - C) HEART.
 - D) EA.
 - E) nothing. They were unable to complete the task.
73. Split-brain patients have had their _____ surgically cut.
- A) hippocampus
 - B) limbic system
 - C) corpus callosum
 - D) sensory cortex
 - E) reticular formation
74. French psychiatrist Joseph Capgras described a patient who reported that imposters had replaced her husband, children, and herself. Her inability to recognize the faces of her close family members or herself suggests that the
- A) right hemisphere of her brain was damaged.
 - B) corpus callosum had been severed.
 - C) thalamus in the brainstem is not functioning properly.
 - D) angular gyrus was compromised leading to aphasia.
 - E) left temporal lobe was injured.
75. When looking at a flying bird, we are consciously aware of our cognitive processing (“It’s a bird!”) but not of our subconscious processing of the bird’s form, color, distance, and movement. This illustrates what psychologists call
- A) dual processing.
 - B) serial processing.
 - C) brain plasticity.
 - D) selective attention.
 - E) cognitive neuroscience.

Answer Key - AP Practice unit 3 and 4

1. C
2. A
3. A
4. D
5. C
6. A
7. A
8. A
9. E
10. D
11. B
12. A
13. C
14. B
15. B
16. D
17. D
18. D
19. B
20. D
21. A
22. B
23. D
24. D
25. E
26. C
27. A
28. B
29. A
30. C
31. C
32. D
33. D
34. C
35. D
36. B
37. B
38. B
39. A
40. A
41. C

- 42. D
- 43. E
- 44. B
- 45. A
- 46. C
- 47. B
- 48. C
- 49. D
- 50. D
- 51. C
- 52. E
- 53. B
- 54. C
- 55. C
- 56. D
- 57. E
- 58. D
- 59. D
- 60. C
- 61. C
- 62. A
- 63. E
- 64. C
- 65. D
- 66. A
- 67. C
- 68. C
- 69. D
- 70. D
- 71. B
- 72. A
- 73. C
- 74. A
- 75. A